



European
Commission

JRC TECHNICAL REPORTS

Consolidate Data Report for EU Enlargement and Neighbouring Countries

Strahil Panev,
Paolo Bertoldi

2014

European Commission

Joint Research Centre
Institute for Energy and Transport

Contact information

Strahil Panev

Address: Joint Research Centre, Via Enrico Fermi 2749, TP 450, 21027 Ispra (VA), Italy

E-mail: forename.surname@ec.europa.eu

Tel.: +39 0332 78 6255

Fax: +39 0332 78 9268

<http://iet.jrc.ec.europa.eu/>

<http://www.jrc.ec.europa.eu/>

This publication is a Technical Report by the Joint Research Centre of the European Commission.

Legal Notice

This publication is a Technical Report by the Joint Research Centre, the European Commission's in-house science service. It aims to provide evidence-based scientific support to the European policy-making process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication.

JRC88468

EUR 26645 EN

ISBN 978-92-79-38297-0

ISSN 1831-9424 (online)

doi: 10.2790/20536

Luxembourg: Publications Office of the European Union, 2013

© European Union, 2013

Reproduction is authorised provided the source is acknowledged.

Printed in Luxembourg

Summary note

This report consolidates data on residential buildings for the EU Enlargement countries: Albania; Bosnia and Herzegovina; Kosovo*; Montenegro; the Former Yugoslav Republic of Macedonia; Serbia, and Turkey; as well as for the European Neighborhood countries: Ukraine and Moldova.

The data have been collected from several existing sources and concerns the existing building stock in each of the EU Enlargement countries ranging from basic statistics on the inventory of residential buildings to the energy performance of the entire stock.

In particular, the inventory data consisted:

- The total number of dwellings, buildings and floor area of single- and multi-family houses
- The breakdown of number of dwellings, buildings and floor area of single and multi-family houses by age group
- The number of dwellings by tenure type (tenant, owner occupier, cooperative)

Data on energy performance included:

- Building envelope - the U-values of walls, roof, floor, windows of single- and multi-family houses
- Heating installations - the number of dwellings equipped with stove, gas furnace, electric heating (fix installed), central heating and district heating
- The number of dwellings by heating energy carrier
- The consumption levels of single- and multi-family houses by age group
- The final energy consumption by energy carrier in residential and non-residential buildings

The collection exercise was undertaken in the beginning of 2013 and the following references were used as sources:

- Eurostat database
epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database
- International Energy Agency (IEA) data base
<http://www.iea.org/countries/non-membercountries/>
- Statistical Office of the Republic of Serbia
<http://webrzs.stat.gov.rs/WebSite/>
- Statistical Office of Montenegro (MONSTAT)
<http://www.monstat.org/eng/index.php>
- State Statistical Office of the former Yugoslav Republic of Macedonia
http://www.stat.gov.mk/Default_en.aspx
- Turkish Statistical Institute (TurkStat)
<http://www.turkstat.gov.tr/Start.do>
- The Institute of Statistics of the Republic of Albania (INSTAT)
<http://www.instat.gov.al/al/home.aspx>
- State Statistics Service of Ukraine
<http://ukrstat.org/en>
- National Bureau of Statistic of the Republic of Moldova
<http://www.statistica.md/index.php?l=en>
- Kosovo* Agency of Statistic
<http://esk.rks.gov.net/eng/home>

* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence

- ENSI. 2012 "Study on Energy Efficiency in Buildings in the Contracting Parties of the Energy Community" Final Report prepared for Energy Community, Vienna
<http://www.energy-community.org/pls/portal/docs/2514181.PDF>
- Episcopo Building Typology database
<http://www.episcopo.eu/building-typology>
- Moldovan Residential Energy Efficiency Financing Facility (MoREEFF)
<http://moreeff.info/en/savings/about-savings/>

Albania

Inventory of buildings

Stock by building type

Buildings

Type	Number of buildings
Single family	500,912
Multifamily(semi-detached or terraced)	75,184
Apartments buildings	22,171
Total	598,267
Source:	INSTAT -Population and housing Census
Year of data:	2011
Notes:	

Dwellings

Type	Number of dwellings
Inhabited dwellings	710,203
Non inhabited dwellings	302,197
Total	1,012,400
Source:	INSTAT -Population and housing Census
Year of data:	2011
Notes:	

Stock by age band

Buildings

Age	Single family	Multi family	Total
≤1960	30,833	13,362	44,195
1961-1980	59,923	18,572	78,495
1981-1990	54,090	10,853	64,943
1991-2000	108,752	15,720	124,472
2001-2005	49,972	7,164	57,136
2006-2011	42,495	6,052	48,547
unknown	154,847	25,330	180,177
Total number	500,912	97,053	597,965
Source:	INSTAT -Population and housing Census		
Year of data:	2011		
Notes:	The multi-family house category includes: terraced houses, multi-family and apartment blocks		

Stock by occupant profile

Buildings

Owner profile	Number of buildings
Rent	
Owner occupied	
Cooperative	
Other	
Source:	
Year of data:	
Notes:	

Dwellings

Owner profile	Number of dwellings
Rent	38,780
Owned by State	3,572
Owner occupied	651,632
Living free of rent	28,278
Total	722,262
Source:	INSTAT -Population and housing Census
Year of data:	2011
Notes:	

Energy performance of buildings

Building envelope

Age band	Walls	Roof	Floor	Windows
≤ 1945				
1946-1960				
1960-1980				
1981-1990				
1991-2000				
2001-2004				
2005-now				
Source:				
Year of data:				
Notes:				

Heating installations

Centralization of heat supply

Type of heating	Number of households
District heating	0
Collective central heating	8,373
Individual central heating (e.g. dwelling system)	14,565

stoves, fire places and other	552,815
Electric heaters	60,823
Air conditioners	42,731
No heating	42,955
Total	722,262
<i>Source:</i>	<i>INSAT -Population and housing Census</i>
<i>Year of data:</i>	<i>2011</i>
<i>Notes:</i>	

Main type of energy source used for heating

Energy carrier	Number of households
District Heating	0
Electricity	111,020
Gas	150,321
Solar panel	305
Wood	414,982
Other type of heating	2,679
No heating	42,955
Total	722,262
<i>Source:</i>	<i>INSAT -Population and housing Census</i>
<i>Year of data:</i>	<i>2011</i>

Consumption levels

Age band	Final energy consumption (kWh/m ²)
≤ 1940	
1940-1970	
1970-1987	
1987-2006	
2006-now	
<i>End uses included:</i>	
<i>Source:</i>	
<i>Year of data:</i>	
<i>Notes:</i>	

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	0
Total petroleum	87
Natural Gas	0

Electricity	233
Derived heat	0
Renewable energy	5
Biofuels-Biomass(wood)	170
Total	495
Source:	IEA Energy Balance for Albania
Year of data:	2011
Notes:	

All end uses (all tertiary buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	2
Total petroleum	26
Gas	2
Electricity	112
Derived heat	0
Renewable energy	6
Biofuels	16
Source:	IEA Energy Balance for Albania
Year of data:	2011
Notes:	

Bosnia and Herzegovina

Statistical information according the building type categorization is collected only since 2002, meaning related only to new buildings. Information about older buildings is not available in official statistics within such format. (ENSI.2012)

There exist no state level specific methods and indicators used for building stock inventory for the purpose of energy performance in Bosnia and Herzegovina.

Data about public buildings is also collected by different manipulates and ministries, but this information is not collected centrally.

The new Regulations on Energy Certification of buildings (OG FBiH 50/10) offer the following types of buildings for certification purposes (ENSI.2012):

- constructions till 1940
- constructions from 1940 to 1970
- constructions after 1970
- modern building

According to the new Regulations on Energy Certification of buildings adopted in Federation of Bosnia and Herzegovina, the indicator kWh/m²·year is used. However, the specific values for different types of buildings are not developed yet.

The former Yugoslav Republic of Macedonia

Inventory of buildings

The State Statistical Office of the former Yugoslav Republic of Macedonia (<http://www.stat.gov.mk/>) is following EUROSTAT – Classification for Types of Constructions CC 1997. According to this system the categorization of building types are the same as presented for Bosnia and Herzegovina. However, official statistic relatively recently started to follow this categorization, therefore relevant information is available only for new buildings, while for the older buildings the official statistic provides information only for residential buildings.(ENSI 2012)

Buildings

Type	Number of buildings
Single family	340,595
Multi family	105,640
Total	446,235
Source:	NEEAP/State statistical office -Census 2002
Year of data:	2002
Notes:	

Dwellings

Type	Number of dwellings
Single family	
Multi family	
Total	697,529
Source:	State statistical office -Census 2002
Year of data:	2002
Notes:	

Living area

Type	Living area in m ²
Single family	
Multi family	
Total	49,671,709
Source:	State statistical office -Census 2002
Year of data:	2002
Type of floor area:	Useful floor area
Notes:	

Stock by age band

Dwellings

Age	Single family	Multi family	Total
<1919			7,759
1919-1945			27,521
1946-1960			73,688
1961-1970			136,418
1971-1980			181,969
1981-1991			151,434
1991-1999			74,475
1999<			44,265
Total number	0	0	697,529
<i>Source:</i>	First NEEAP 2010-2018		
<i>Year of data:</i>	2010		
<i>Notes:</i>			

Stock by occupant profile

Buildings

Owner profile	Number of buildings
Rent	
Owner occupied	
Cooperative	
Other	
<i>Source:</i>	
<i>Year of data:</i>	
<i>Notes:</i>	

Dwellings

Owner profile	Number of dwellings
Rent	
Owner occupied	
Cooperative	
Other	
<i>Source:</i>	
<i>Year of data:</i>	
<i>Notes:</i>	

Energy performance of buildings

Building envelope

U values of single family buildings

Age band	Walls	Roof	Floor	Windows
≤ 1945				
1946-1960				

1960-1980				
1981-1990				
1991-2000				
2001-2004				
2005-now				
Source:				
Year of data:				
Notes:				

Heating installations

Centralization of heat supply

Type of heating	Number of dwellings
District heating	
Collective central heating (e.g. system for block of dwellings)	
Individual central heating (e.g. dwelling system)	
Local heating (e.g. room system)	
Source:	
Year of data:	

Heating (all residential buildings)

Energy carrier	% of occupied dwellings
District Heating	
Electricity	
Gasoil	
Gas	
Coal	
Wood	
Other (heat pumps. pellets. oth)	
Source:	
Year of data:	

Consumption levels

Age band	Final energy consumption (kWh/m ²)
≤ 1940	
1940-1970	
1970-1987	
1987-2006	
2006-now	
End uses included:	
Source:	
Year of data:	
Notes:	

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	2
Total petroleum	44
Natural Gas	0
Electrical energy	288
Derived heat	37
Renewable energy	0
Biofuels-Biomass(wood)	170
<i>Source:</i>	State Statistic office
<i>Year of data:</i>	2011

All end uses (all tertiary buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	2
Total petroleum	74
Gas	2
Electrical energy	138
Derived heat	15
Renewable energy	1
Biofuels	14
<i>Source:</i>	State Statistic office
<i>Year of data:</i>	2011

Moldova

Inventory of buildings

Stock by building type

Dwellings

Type	Number of dwellings
Single family	795,690
Multi family	267,008
Total	1,062,698
Source:	National Bureau of statistic - Census 2004
Year of data:	2004
Notes:	

Living area

Type	Living area in m ²
Single family	
Multi family	
Total	79,860,300
Source:	National Bureau of Statistics
Year of data:	2012

Stock by age band

Buildings

Age	Single family	Multi family	Total
≤1918			
1919-1944			
1945-1960			
1961-1980			
1981-1990			
1991-2000			
2001-2010			
Total number	0	0	0
Source:			
Year of data:			
Notes:			

Dwellings

Age	Single family	Multi family	Total
≤1918			
1919-1944			
1945-1970			
1971-1980			

1981-1990			
1991-2000			
>2000			
Total number	0	0	0
Source:			
Year of data:			
Notes:			

Stock by occupant profile

Dwellings

Owner profile	Number of dwellings
Private	1040726
Public -municipal owned	36900
Other	3872
Source:	National Bureau of Statistics
Year of data:	2004
Notes:	

Living area

Owner profile	Living area
Private owner	76900000
Public owner	2300000
Other	100000
Source:	National Bureau of Statistics
Year of data:	2010
Type of floor area:	

Energy performance of buildings

Building envelope

U values of single family buildings

Age band	W/m ² K			
	Walls	Roof	Floor	Windows
before 1977	1.8	1.4	1.4	3.5-4.5
1978-1994	1.4	1.2	1.3	
Source:	MOREEFF			
Year of data:	2012			
Notes:				

U values of multifamily buildings W/m²K

Age band	Walls	Roof	Floor	Windows
before 1977	1.8	1.4	1.4	3.5-4.5
1978-1994	1.4	1.2	1.3	
Source:	MOREEFF			
Year of data:	2011			
Notes:				

Heating installations

Centralization of heat supply

Type of heating	Number of dwellings
Stove	708,573
Central Heating and equivalent Heating Systems	152,932
District Heating	206,181
Source:	National Bureau of Statistics
Year of data:	2004
Notes:	

Consumption levels

Age band	Final energy consumption (kWh/m ²)
<1919	
1919-1944	
1945-1960	
1961-1980	
1981-1990	
1991-2000	
2001-2010	
End uses included:	
Source:	
Year of data:	
Notes:	

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	26
Total petroleum	285
Gas	343

Electrical energy	125
Derived heat	129
Renewable energy	0
Biofuels	0
<i>Source:</i>	IEA
<i>Year of data:</i>	2009
<i>Notes:</i>	

All end uses (all tertiary buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	
Total petroleum	2
Gas	4
Electrical energy	74
Derived heat	47
Renewable energy	0
Biofuels	0
<i>Source:</i>	IEA
<i>Year of data:</i>	2009
<i>Notes:</i>	

Montenegro

Building stock inventory is not yet established in Montenegro. State Statistical Office is collecting data about new buildings built every year but this data does not contain information regarding energy performance, energy consumption etc.

The Statistic Office of Montenegro defines building stock as:

- residential
- Business units and institutions.

Inventory of buildings

Buildings

Type	Number of buildings
Single family	
Multi family	
Total	
Source:	
Year of data:	
Notes:	

Dwellings

Type	Number of dwellings
Single family	
Multi family	
Total	314,704
Source:	MONSTAT -Census 2011
Year of data:	2011
Notes:	

Stock by age band

Buildings

Age	Single family	Multi family	Total
≤1949			
1950-1959			
1960-1969			
1970-1979			
1980-1989			
1990-1999			
2000-2011			
Not identified			
Total number	0	0	0
Source:			
Year of data:			
Notes:			

Stock by occupant profile

Buildings

Owner profile	Number of buildings
Rent	
Owner occupied	
Cooperative	
Other	
Source:	
Year of data:	
Notes:	

Dwellings

Owner profile	Number of dwellings
Rent	
Owner occupied	
Cooperative	
Other	
Source:	
Year of data:	
Notes:	

Energy performance of buildings

Building envelope

U values of single family buildings

Age band	Walls	Roof	Floor	Windows
≤ 1945				
1946-1960				
1960-1980				
1981-1990				
1991-2000				
2001-2004				
2005-now				
Source:				
Year of data:				
Notes:				

Heating installations

Centralization of heat supply

Type of heating	Number of dwellings
District heating	
Collective central heating (e.g. system for block of dwellings)	
Individual central heating (e.g. dwelling system)	

Local heating (e.g. room system)	
Source:	
Year of data:	
Notes:	

Consumption levels

Age band	Final energy consumption (kWh/m ²)
≤ 1940	
1940-1970	
1970-1987	
1987-2006	
2006-now	
End uses included:	
Source:	
Year of data:	
Notes:	

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	3
Total petroleum	5
Natural Gas	0
Electrical energy	106
Derived heat	0
Renewable energy	0
Biofuels-Biomass(wood)	230
Source:	MONSTAT
Year of data:	2011
Notes:	

Serbia

Inventory of buildings

Stock by building type

Dwellings

Type	Number of dwellings
In buildings with one dwelling	1,931,183
in buildings with two dwellings	268,346
in buildings with three or more dwellings	1,023,596
other buildings	8,806
Total	3,231,931
Source:	Statistical Office / Census 2011
Year of data:	2011
Notes:	All dwellings

Living area

Type	Living area in m ²
Single family	
Multi family	
Total	217,849,058
Source:	Statistical Office / Census 2011
Year of data:	2011
Type of floor area:	
Notes:	

Stock by age band

Buildings

Age	Single family	Multi family	Total
≤1919			4%
1919-1945			12%
1946-1970			39%
1971-1980			24%
1981-1990			11%
1991-2000			6%
2001-2011			4%
Total number	0	0	
Source:	Episcope		
Year of data:	2012		
Notes:			

Dwellings

Age	Single family	Multi family	Total
before 1946			322,244
1946 - 1960			328,962
1961 - 1980			1,192,804
1981 - 2000			798,403
2001 - 2011			327,555
Total number	0	0	2,969,968
<i>Source:</i>	Statistical Office / Census 2011		
<i>Year of data:</i>	2011		
<i>Notes:</i>	Inhabited dwellings		

Living area

Age	Single family	Multi family	Total
≤1961			
1961-			
1960-1980			
1981-1990			
1991-2002			
Total number			
<i>Source:</i>			
<i>Year of data:</i>			
<i>Type of floor area:</i>			
<i>Notes:</i>			

Stock by occupant profile

Dwellings

Owner profile	Number of dwellings
Rent	163,430
Owner occupied	2,121,484
Others	136,949
Total inhabited dwellings	2,421,863
<i>Source:</i>	Statistical Office / Census 2011
<i>Year of data:</i>	2011
<i>Notes:</i>	

Energy performance of buildings

Building envelope

U values of single family buildings

Age band	Walls	Roof	Floor	Windows
≤ 1945				
1946-1960				
1960-1980				
1981-1990				

1991-2000				
2001-2004				
2005-now				
Source:				
Year of data:				
Notes:				

Heating installations

Centralization of heat supply

Type of heating	Number of dwellings
District heating	801,113
Collective central heating (e.g. system for block of dwellings)	
Individual central heating (e.g. dwelling system)	
Local heating (e.g. room system)	
Source:	Statistical office of Serbia
Year of data:	2011
Notes:	

Consumption levels

Age band	Final energy consumption (kWh/m ²)
≤ 1940	
1940-1970	
1970-1987	
1987-2006	
2006-now	
End uses included:	
Source:	
Year of data:	
Notes:	

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	388
Total petroleum	70
Natural Gas	236
Electrical energy	1261
Derived heat	430

Renewable energy	0
Biofuels	160
<i>Source:</i>	Statistical office of Serbia
<i>Year of data:</i>	2011
<i>Notes:</i>	

All end uses (all tertiary buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	381
Total petroleum	172
Gas	98
Electrical energy	430
Derived heat	80
Renewable energy	0
Biofuels	12
<i>Source:</i>	Statistical office of Serbia
<i>Year of data:</i>	2011
<i>Notes:</i>	

Turkey

Inventory of buildings

Stock by building type

Dwellings

Age	Single family	Multi family	Total
≤1960			809,000
1961 - 1970			1,146,000
1971 - 1980			2,604,000
1981 - 1990			3,684,000
1991 - 2000			4,780,000
2001 - 2011			4,237,000
unknown			2,195,000
Total number	0	0	19,455,000
Source:	<i>Turkish Statistical Institute Census 2011</i>		
Year of data:	2011		
Notes:			

Stock by occupant profile

Dwellings

Owner profile	Number of dwellings
Rented	23.8%
Owner occupied	67.3%
Occupied rent free	7.3%
Other(provided by government)	1.5%
Total	100%
Source:	<i>Turkish Statistical Institute -Census 2011</i>
Year of data:	2011
Notes:	

Energy performance of buildings

Building envelope

U values of single family buildings

Age band	Walls	Roof	Floor	Windows
<1919				
1919-1944				
1945-1960				

1961-1980				
1981-1990				
1991-2000				
2001-2010				
Source:				
Year of data:				
Notes:				

Heating installations

Centralization of heat supply

Type of heating	number of dwellings
Stove (natural gas stove included)	11,109,000
Central heating for one dwelling	4,971,000
Central heating for one or more building	2,210,000
Air conditioner, electricity and other system	1,150,000
No heating system	14,000
total	19,454,000
Source:	Turkish Statistical Institute - Census 2011
Year of data:	2011
Notes:	

Consumption levels

Age band	Final energy consumption (kWh/m ²)
<1919	
1919-1944	
1945-1960	
1961-1980	
1981-1990	
1991-2000	
2001-2010	
End uses included:	
Source:	
Year of data:	
Notes:	

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	5,786
Total petroleum	1,275
Natural Gas	7,225
Electrical energy	3,807
Derived heat	0
Renewable energy	1,904
Biofuels-Biomass	3,530
<i>Source:</i>	<i>IEA International Energy Agency</i>
<i>Year of data:</i>	<i>2011</i>
<i>Notes:</i>	

All end uses (all tertiary buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	278
Total petroleum	0
Gas	2040
Electrical energy	4131
Derived heat	0
Renewable energy	
Biofuels	0
<i>Source:</i>	<i>IEA International Energy Agency</i>
<i>Year of data:</i>	<i>2011</i>
<i>Notes:</i>	

Ukraine

Inventory of buildings

Dwellings

Type	Number of dwellings
Single family	
Multi family	
Total	19,327,000
Source:	Ukraine statistic office
Year of data:	2011
Notes:	

Living area

Type	Living area in m ²
Single family	
Multi family	
Total	1,086,000,000
Source:	Ukraine statistic office
Year of data:	2011
Type of floor area:	Total floor area
Notes:	

Stock by age band

Buildings

Age	Single family	Multi family	Total
<1919			5%
1919-1945			12%
1946-1960			25%
1961-1970			24%
1971-1980			16%
1981-1990			11%
>1991			7%
Total number	0	0	100%
Source:	Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine		
Year of data:	2011		
Notes:			

Stock by occupant profile

Buildings in urban area (approximately 40% of the total building stock)

Owner profile	Number of buildings
private	94.6%
communal property	5%
state property	0.4%
Total	100.0%
Source:	<i>EBRD Market Assessment ,, Residential Sector of Ukraine: Legal, Regulatory, Institutional, Technical and Financial Consideration-Final Report, August 2011</i>
Year of data:	
Notes:	

Energy performance of buildings

U values of single family buildings

Age band	Walls	Roof	Floor	Windows
<1919				
1919-1944				
1945-1960				
1961-1980				
1981-1990				
1991-2000				
2001-2010				
Source:				
Year of data:				
Notes:				

Heating installations

Centralization of heat supply

Type of heating	Number of dwellings
District heating	63%
Collective central heating (e.g. system for block of dwellings)	

Individual central heating (e.g. dwelling system)	
Local heating (e.g. room system)	
Source:	
Year of data:	
Notes:	

Consumption levels

Multifamily houses

Age band	Final energy consumption (kWh/m ²)
≤ 1940	
1940-1970	
1970-1987	
1987-2006	
2006-now	
End uses included:	
Source:	
Year of data:	
Notes:	Estimate

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	708
Total petroleum	84
Natural Gas	14,060
Electrical energy	3,308
Derived heat	4,507
Renewable energy	0
Biofuels and waste	937
Source:	IEA - Energy Balance Ukraine
Year of data:	2011
Notes:	

All end uses (all tertiary buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	167
Total petroleum	121
Gas	423
Electrical energy	1,821

Derived heat	2,228
Renewable energy	0
Biofuels	42
Source:	IEA - Energy Balance Ukraine
Year of data:	2011
Notes:	

Inventory of buildings

Stock by building type

Dwellings

Type	Number of dwellings
Single family	245,686
Multi family	70,891
Unknown	95,918
Total	412,495
Source:	Kosovo Agency of Statistic Census2011
Year of data:	2011
Notes:	

Stock by age band

Dwellings

Age	Single family	Multi family	Total
≤1949			
1950-1959			
1960-1969			
1970-1979			
1980-1989			
1990-1999			
2000-2011			
Not identified			
Total number	0	0	0
Source:			
Year of data:			
Notes:			

Stock by occupant profile

Dwellings

Owner profile	Number of dwellings
Rent	8,367
Owner occupied	284,023
Cooperative	268
Other	4,432
Source:	Kosovo Agency of Statistic Census2011
Year of data:	2011
Notes:	

* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence

Energy performance of buildings

Building envelope

U values of single family buildings

Age band	Walls	Roof	Floor	Windows
≤ 1945				
1946-1960				
1960-1980				
1981-1990				
1991-2000				
2001-2004				
2005-now				
Source:				
Year of data:				
Notes:				

Heating installations

Centralization of heat supply

Type of heating	Number of dwellings
District heating	9,698
Collective central heating (e.g. system for block of dwellings)	0
Individual central heating (e.g. dwelling system)	14,231
Local heating (e.g. room system)	268,642
unknown	119,441
Source:	Kosovo Agency of Statistic Census2011
Year of data:	2011
Notes:	

Heating (all residential buildings)

Energy carrier	% of occupied dwellings
District Heating	9,698
Electricity	15,356
Oil	10,812
Gas	817
Coal	6,932
Wood	259,031
Unknown	109,949
Source:	Kosovo Agency of Statistic Census2011
Year of data:	2011
Notes:	

Consumption levels

Age band	Final energy consumption (kWh/m ²)
≤ 1940	
1940-1970	
1970-1987	
1987-2006	
2006-now	
End uses included:	
Source:	
Year of data:	
Notes:	

Energy carriers

All end uses (all residential buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	8
Total petroleum	35
Natural Gas	0
Electrical energy	210
Derived heat	6
Renewable energy	0
Biofuels-Biomass(wood)	108
Source:	First NEEAP of Kosovo
Year of data:	2008
Notes:	

All end uses (all tertiary buildings)

Energy carrier	Final energy consumption (ktoe)
Solid fuels	5
Total petroleum	41
Gas	0
Electrical energy	30
Derived heat	4
Renewable energy	0
Biofuels	55
Source:	First NEEAP of Kosovo
Year of data:	2008
Notes:	

European Commission

Joint Research Centre
Institute for Energy and Transport

Contact information

Strahil Panev

Address: Joint Research Centre, Via Enrico Fermi 2749, TP 450, 21027 Ispra (VA), Italy

E-mail: forename.surname@ec.europa.eu

Tel.: +39 0332 78 6255

Fax: +39 0332 78 9268

<http://iet.jrc.ec.europa.eu/>

<http://www.jrc.ec.europa.eu/>

This publication is a Technical Report by the Joint Research Centre of the European Commission.

Legal Notice

This publication is a Technical Report by the Joint Research Centre, the European Commission's in-house science service. It aims to provide evidence-based scientific support to the European policy-making process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication.

JRC88468

EUR 26645 EN

ISBN 978-92-79-38297-0

ISSN 1831-9424 (online)

doi: 10.2790/20536

Luxembourg: Publications Office of the European Union, 2013

© European Union, 2013

Reproduction is authorised provided the source is acknowledged.

Printed in Luxembourg

JRC Mission

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners.

*Serving society
Stimulating innovation
Supporting legislation*

